such great vicissitudes from a thousand accidents, that Diseases which are always so much influenced by ~~them~~ these Circumstances, put on different Appearances in almost every Age & Country. I would not pretend to say that the Disease which is designed as the Subject of the following pages was entirely unknown to the Ancients. Some of them have dropped a few Hints which give us Reason to suppose they were acquainted with it; but what they have said tends so little to explain the Cause, ~~to~~ or to point out a rational Method of curing the Disease, that we should receive but little Assistance from ~~compiling~~ copying their Sentiments upon this Subject.

Among modern Authors this Disease is distinguished by the Name of the Bilious or

Yellow Fever. Some have pretended to point out a Difference between these two Fevers, & to prove that they depend upon Contagious & specifically different. But I hope we shall be able to show hereafter that they are both One, and the same Disease, & that their Difference consists in their Degree Only. — I shall therefore in the following Dissertation consider them as One Disease & treat them as such. a skillful Physician will always know how to vary his Method of Cure according to the greater or lesser violence of the Disorder.

We shall begin by describing the most ordinary Phanomena which occur in the Course of the Disease.

It generally appears About the Middle of Summer

or Beginning of Autumn, Decreases to rage upon the Approach of Winter. As soon as a Patient is seized with the Disease he immediately feels a Prostration of Strength - great Anxiety - intense pain in the Head - Coldness & Shivering. These Symptoms are quickly succeeded by great Heat - a burning Sensation about the Præcordia - a dry - reddish - florid or black Tongue - a hoarse shrill voice - immense Thirst especially for cold subacid Drinks. - the Lips & Teeth are covered with a black kind of Sordes. the Respiration is difficult & laborious. the Urine has various Appearances. Sometimes red - black & in many Cases Bloody. the Pulse in the Beginning is full & tense, but after a While

becomes small - weak & irregular. the Patient complains of a bitter Taste in his Mouth - tosses himself in his Bed from side to side without being able to rest long in any Posture. he feels a violent fixed pain about the Praecordia which is always encreased upon being pressed. - the whole Hypocondriac Region is sometimes swelled & hard. the Patients nauseates Food, & vomits up every thing he takes together with large Quantities of green, & sometimes blackish Bile resembling Coffee-Grounds. the Eyes are inflamed - of a yellowish Colour - & often suffused with Blood. the Bowels are sometimes bound & sometimes Open. the Face & Whole

Skin are tinged of a yellow Colour which in the
Progress of the Disease is changed to a livid
Grey. black Spots begin to make their Appearance
About the Neck & Breast. the Blood is now poured
forth in a thin dissolved state from the Nose
Mouth, & urinary passages, & is sometimes
ejected in Vomiting mixed with black bile. the
Hands & Feet now begin to grow cold. a Delirium
comes On, & sometimes a Syncope. the limbs
begin to tremble. the Patient now feels no
Pain, & sometimes on a sudden recovers
from his Delirium. But at Once he is seized
with a Subsultus Tendinum or Convulsions in dif-
-ferent parts of the Body, or general Convulsions
which for the most part close the moving Scene,

& put an End to his Life. —

It must not be imagined that this History belongs to all the different Degrees of this Disease. — perhaps the Symptoms are seldom found to occur exactly in the Order we have described them. There is nothing more difficult in Medicine than to give a complete History of a Disease, nor will this Difficulty ever be removed 'till we are able fully to collect all the Species & varieties of Disorders & to arrange them under proper Genera & Orders. by this means we shall be able to distinguish Diseases by those Marks Only which are truly pathognomonic, & that too in a few words.

many of the symptoms however related in this History belong only to the Bilious Fever, and are to be met with in no Other Disease, such in particular are the violent pain About the Precordia - the constant vomiting, & the yellow Colour of the Skin when joined with ~~vomiting~~ Fever. these will serve to distinguish it from all the Cases of Nervous - Inflammatory and petechial Fevers. the last mark affords a sure Diagnosis between the Bilious Fever & the Jaundice. ——

There is One Disease which is Often confounded with the Bilious Fever viz: the Marsh or Camp Fever so accurately described by Sir John Pringle in his Treatise on Diseases of the Army. this Disease Often alternates with: the Dysentery,

* See a Note in Sir John Pringle's Dis=
=eases of the Army. p. 205.

It appears to be the same Disease only diversi-
-fied by the greater or lesser Moisture of the wea-
-ther. it depends on an Obstructed Perspiration,
which when effused into the Intestines, & mixing
with the Bile constitutes the Dysentery. the
Discharge of Bile in this Disorder is only an Accidental
Circumstance, & does not always attend, especially
in the Manner, or in the Degree we have taken
notice off in the Bilious Fever, nor does the Patient
complain of ~~that~~ any remarkable pain or
Burning about the Praecordia. I will not
however say, but what both Diseases may
have been originally the same. their Difference
may be entirely owing to the Influence of Climates
& other Circumstances upon them. Dr. Rush seems
to be of this Opinion.* the Camp as well as Bilious Fever
in time becomes a contagious Disease. —

* See Sir John Pringle's Diseases of the Army page 82-3

+ Ibid: page 83. —

The Causes which ~~[illegible]~~ on ~~[illegible]~~ favour the Operation of the Contagion which produces this Disease, are the same ~~[illegible]~~ bring on a Predisposition ~~[illegible]~~ to Other Malignant Fevers, such as

1st Heat joined with Moisture * 2nd very calm weather.

3rd the intense Heat of the Sun continued for some time. 4th great Quantities of Animal Food.

This so much disposes Persons to be affected with contagious Diseases of all kinds that the Reason Why the Plague & Other pestilential Disorders prevail so much less now, than they did a hundred Years ago, has justly been Attributed among Other Causes to the greater use of Vegetables in Diet than formerly. — 5th Intemperance of all kinds by weakening the Energy of the

Lenorium favours the action of Contagion upon the System. This Disease is called by the French "La Fievre Matelotte" because the Sailors upon their Arrival in the West Indies are so very subject to it. This may be easily accounted for when we reflect, how very apt Sailors are above all men to drink to Excess, & to be guilty of most kinds of Intemperance. 6th all high seasoned Food - profuse Evacuations & violent Exercise of the Body tend to increase the Sensibility of the System, & thus render it more liable to be affected by the Contagion. But 7th there is nothing which predisposes more to this Disease than those Passions of the Mind which are properly called Sedative, more especially Grief & Fear. in what

manner they Operate it is not our Business to ex-
-plain. But the Effects they induce are entirely
analagous to the Effects of the Causes we spoke off before. it
is owing to the Debility induced upon the System
by these Opinions that the near Relations & Friends of
Persons who are seized with this Disease are
more apt to be affected with it than Others. this
explains to us likewise the Reason why the
Plague & all Other contagious Diseases make
greater Havock at their first Appearance in
a City or Country than ever they do Afterwards,
as People become gradually so used to them that
their Fears after a while in some measure
subside. —

It is to be wished ~~to be wished~~ we could assign the Proximate Cause of this Disease as easily as we have assigned the predisposing. Nature who seems to have delighted in simplicity in her other works, has wrapped herself in a veil in the Animal Oeconomy, & concealed her more secret Operations from our view. we no sooner begin to investigate them, than we are at once lost in a Circle of Causes & Effects. These Difficulties occur with peculiar force in our Inquiries into the proximate Cause of the Bilious Fever.

It would employ too much time to here to recount all the Opinions that have subsisted among Physicians upon this Subject.

~~[illegible]~~

* et Bilis Putrescentiam examinarem in unam Phialam infudi Bilis recentis semun=ciam, cum Aqua fontana sesquiunciam, & in Alteram Phialam infudi Carnis, ex eodem animali, recentis, et in pulpam contusa Drachmas duas cum Aqua fontana Unciis duo=bus. Utramque Phialam apertam reposui in Hypocausto, ad Calorem Hominis sani calfac=to. post Horas sex, Caro Odorem summe fœten=tem cadaverosum ~~[illegible]~~ praebebat, Bilis vero Odor nequaquam mutata fuit, & non nisi post Horas qua=

I shall only hint at one or two of them.

For a long time this Disease was supposed to have its seat in the Bile upon the Aut. of a received Opinion that it was more disposed to Putrefaction than any of the Other Humors of the Body. But we have a direct Experiment that proves the contrary of this Doctrine to be true.* nor can we attribute the Disease to an encreased Secretion of Bile any more than we can the Small pox to the profuse Spitting, or the Hysteria to the immoderate Flow of Urine which generally take place in those Diseases. I am so far from thinking that it depends upon a morbid Acrimony of the Bile, that I rather imagine the Acrimony of this Fluid is considerably deminished. all

= draginta Acto, Odorum velut moschi exspirabat.

Dr. Ramsay's Inaugural Dissertation
"de Bile" Exper. XXV. —

secretions we know become acrid by stagnation, from their fluid parts being reabsorbed & carried into the Circulation. Now as the Bile is discharged in such large Quantities as soon as it is secreted, it has not time to acquire even that Degree of Acrimony which is natural to it. I know many Physicians talk of Matter being thrown up so acrid as to corrode the Oesophagus & Fauces. But I am apt to think there may be some Fallacy in this Observation. The repeated Efforts of vomiting may inflame those Parts so as to render them more sensible

to the Stimulus of the Biles & may thus bring on a great deal of pain: for my part I have often stood by Patients in the Act of vomiting in this Disease, & yet never heard them complain of any thing like that corrosive pain some Author speak off. —

An Opinion of later Date, & now more universally received, is, that it is owing to a putrid Ferment introduced into the Blood, which has the power of assimilating it to itself, & thus bringing on a general Putre-faction. this Notion was originally derived from Galen. ~~[illegible]~~

~~a "Introduced into Chemistry a new principle called the Doctrine of Fermentation or Motion"~~ - the Doctrine was readily adopted by the Chemists - they considered the human Body in the same Light they did their chemical Fields, and imagined that the same Processes were carried On there by Means of Menstrua - Ferments & Registers, which they saw every day in their Operations, entirely forgetting the Animation of the human System which influences all its Operations in such a Manner as to render it difficult to illustrate any of its Functions by Analogies borrowed

from other parts of nature.

This Opinion Although supported so much by Analogy will appear very improbable when we consider

1st: In all Cases of Putrefaction by means of Fermentation we see an entire Change of Properties produced. a total Decomposition ensues, & the new Product retains none of the Properties of the former Mixt. But we see nothing of this kind take place in putrid Fevers. the Blood is only dissolved, or its component parts mixed, but no new Change is induced in its Nature & Properties.

* Juvenula in Febre continua putrida ne-
=glecta prorsum, nullam omnino Artis Opem
experta. Die undecimo Morbi ad nos defertur,
toto pectore, Colloque Anteriore plurimis
Petechiis scatens: Morbo ut illa retulit
quotidie aucto; nullam ut nos judicare debui-
=mus, sui Cautionem praebente. Sanguis ipsi
tunc mipus, in vasculo primo, et tertio Crusta
phlogistica tectus erat, universaque in
rubra parte compactissimus. Duodecimo
morbo Die repetita venae Sectio, crustam dedit
hesternâ densiorem. Ergo nec 12 Dierum Diutur-
=nitate, nec centenarum Petechiarum Pustio-
=ne Sanguis Inflammatoriam suam Spissitudinem,
sive Cruditatem amiserat. vol 11. page 162

2.nd We often see all the Symptoms of a putrid Fever arising from Contagion, & yet the Blood so far from being dissolved retains an Inflam:matory Crust. a remarkable Instance of this may be seen in the works of the learned Dr. DeHaen of Vienna.

3.rd ~~acceptable~~ Ferments, for the most part begin to act as soon as they are applied to the Bodies on which they are designed to Operate, & generally Observe a uniform regular time in their Action, but no:thing of this kind is Observed w.th Regard to the Contagious we are treating off. it sometimes lies ten or twelve Days before it excites the Disease, & sometimes brings it on at

* See Dr. Lind's Treatise upon Fever & Infection page 62

Once.* in these Cases surely no Fermentation could have taken place. the Patients mentioned by Dr. Lind were seized the moment they received the Contagion. Sir John Pringle mentions several Instances of Soldiers who were seized in a Manner equally sudden with these Men. Although he does not tell us they perceived any Smell at the time. But it is highly probable these Symptoms could arise from nothing else, but the immediate Action of the Miasmata or Contagion upon thier ~~Constitution~~ Nervous Systems. these Differences in the time in which the Body is affected, may easily be accounted for by having Recourse to the different

* Physical & Literary Essays of Edinburgh
vol. iii.

Degrees of Sensibility in different Constitutions. — for the Disease always appears to be in a Ratio compounded of the Sensibility or Predisposition of the Patient, and of the violence of the contagious Matter applied. —

4th: Ferments we know act uniformly on whatever Bodies they are applied to, but Contagion we see does not. We often see Persons exposed to it for Months & Years together, without catching the Disorder. Dr. Lining* tells us, that the Negroes in Carolina were never subject to this Disease, altho' they were constantly exposed to it. Physicians & Nurses generally escape it, notwithstanding they are so conversant

with it. What can this be owing to? - per-
-haps we shall be able to show hereafter, that
it depends upon a less irritable nervous System,
on which the Contagion appears principally to
act. in the former Case the Negroes from
being obliged to work so much in the
open Air, & in a Degree of Heat often beyond
Heat of their own Bodies, had contracted a
kind of Insensibility to the Impressions made
by the Contagion, & in the latter Case the Extreme
of Fear, which we mentioned as a chief pre-
-disposing Cause, & the Force of Habit tended
to render the Contagion ineffectual. it is
a common Remark that Strangers only

are subject to the Yellow Fever of the West Indies, & upon this is founded the Distinction, which some make between the Bilious & Yellow Fever. but the latter is only a higher Degree of the former Disease, & arises from Strangers having the Sensibility of their Constitutions greatly encreased, upon coming ~~first to the~~ from a temperate to a warm Climate; which disposes them to be affected not only sooner than the natives, but in a much higher Degree. we find moreover, that these Diseases naturally propagate each Other. I have seen Persons in~~affected~~ ~~from a Yellow Fever which had affected~~ ~~in a few days~~, in so slight a Degree, from a yellow as to recover

Fever y^t proved fatal in a few days.
without ever being in the least Danger; & on
the contrary I have seen the most mild bilious
Fever, produce in Other people such a malignant One
~~in Other People~~, as terminated shortly in
Death with all the dreadful Symptoms formerly enumerated;
~~of dying Death~~. this in my Opinion is
an infragable proof of their being the same
Disease. how differently do we see ye same Con-
-tagion operate in the small pox, producing in
some the most favourable, & in Others the most
dangerous confluent pox! yet no One will pretend to
say that there are two specific Contagions in
this Disease. in both Cases the lesser or greater
Degrees of the Disease depend chiefly upon the

Predisposition of the Patient. I have preferred the Term Bilious, to that of the yellow Fever as the yellow Colour is a mere accidental Circumstance, & does not appear for some Days after the first Attack of the Disease. The Discharge of Bile is in some Measure a pathognomonic Symptom, & is inseperably connected w: the very Nature of this Disease.

5th: The Blood is renewed every two or three Months insomuch that none of its former parts remain. Now as this is the Case, if it was the Seat of any putrefactive process, why should it not be a second time subject to Diseases depending upon it? — we know

of but few well attested Facts of Persons being seized twice in their Lives with contagious Diseases, especially if they had them to a pretty high Degree.

6th. Even supposing a Ferment did act upon the Blood so as dissolve it, yet this would not Ans.r for the Phenomena we see attending this Disease, for we often find a dissolved State of the Blood, & yet no Fever attends it, as in Leucorrhœa & Hysteric Patients, & in Persons under a Salivation. Nor does a dissolved State of the Blood by any means ~~[illegible]~~ imply a necessity for a Fermentation ~~[illegible]~~ preceding; as we sometimes see it take place in febrile Diseases, such as the Pleurasy & Peripneumony

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in which no One can suppose any thing like a Ferment introduced into the Blood.

7th: In Order to support this Doctrine of a putrid Fermentation we are told that the Blood of Persons in hot Climates is much warmer than the Blood of Persons in cold Climates which dispose it more readily to Fermentation, & hence putrid Ferments act more easily upon it. But this Supposition is entirely without Foundation. the Blood of every Person in a healthy State retains the same uniform Temperature in all Countries, even in those, where the Heat of the Atmosphere is 20°: or 30°: Degrees above the ordinary Heat of the Body. –

8th: Much has been said of the fœtid Smell

which attends this Disease as an Argument in Favour of Putrefaction: But I believe ~~that~~ ~~of it has~~ ~~been~~ without any Foundation. for my part, I have often seen this Fever in its last stages, & yet never perceived any smell peculiar to it ~~above other Fevers~~. There is nothing more common than to describe the History of a Disease from ~~so~~ some preconceived notion of its Cause. M: de Sauvages takes notice of this Course of Error in Medicine. I shall beg leave to transcribe his own words upon this subject, as they apply directly to what we have been advancing.

" Dolendum est quod nullus Auctor, ut Ob-
" servat Stahlius, Febrium Species distinxerit,

" nisi ex ~~praecepta~~ praeconcepta, Putredinis &
" Malignitatis Opinione, ita ut Individuas
" Observatione compertas ad suam Speciem,
" imo ad Genus referre, difficillimum sit: hoc
" exinde factum est quod nullus Auctor Histo=
" riam Morbi ~~supponat~~ ab ejus Theoriâ philo=
" =sophicâ, & semper Causam cognatam suppo=
" =nat, atque exinde Signa Characteristica desi=
" =ram contendat, quo Morbo nihil pejus in
" Re medica. —— Nosolog: vol: II p: 239

But allowing a Fator to take place in this Disease, it by no means proves a Putrefaction of the Fluids. ~~to attendo~~ there is no Symptom more Observable in the Scurvy than ~~the~~ a fœtid Smell. This has long been supposed to proceed

* hodum mea Experimenta me convicere de vera Putredine, etiam nondum Alkalina in vivente Corpore Avicinali. in tot morbis putridis etiam conclamatis dum Sanguis venâ tusâ ductus aut aliunde affluens examinatus, nunquam ne in pessimis quidem variolis Putredinis Signa vel minima Mihi dedit. Vol: k: p: 172.

Il seroit sans doute bien singulier que des Malades, auxquels on a observé les Marques les plus complettes de cette prétendue pourriture, pussent non Seulement en réchapper, mais encore jouir peu de tems après de la Santé la plus parfaite. Combien

from a Putrefaction of all the Animal Fluids. but this is not the Case. was this a proper place we could prove it from a Variety of Arguments, & show that the Disease proceeds entirely from an excessive Quantity of an Ammoniacal Salt in the Blood. the Odor of Bodies is so much influenced by their modes of Aggregation, that we may easily conceive of the Fluids emitting a peculiar Smell without having Recourse to Putrefaction. the ingenious Dr. D'Haen who has enriched medicine with so many useful Experiments declares y. he never found any Marks of Putridity in those Fevers which are commonly called putrid. After having raised these Objections to the Theory of Putrefaction it will be expected that I should assign some other proximate Cause. I wish I was able to do so. but such is our present confined State of

de Gens d'ailleurs ont l'haleine si puante qu'on n'ose les approcher, & d'autres dont les Sueurs & la transpiration ont une Fétidité qu'on a de la peine à supporter, & qui ne laissent pourtant pas de jouir de la meilleure Santé ? - Osera-t-on dans cette circonstance, que leur Sang est corrompu ? Combien de substances ne connoît-on pas parmi les Végétables, les Animales & les Minerales, qui exhalent de leur Nature une Odeur des plus desagréable ? Pourquoi les liqueurs vivantes Animales ne pourront-elles pas prendre ce Caractere très-indépendant de la putréfaction, dont on sçait que les Effets sont la Destruction totale du Mixte sans retour ? Lieutaud, prec. de la Médecine. p. 21

knowledge in Physic that I despair of offering any thing complete upon this head. It is however some Compensation, if we can explode false Theories, as we thereby deliver the Mind from the Prejudice of erroneous Opinions, & prepare it for investigating the true with less Embarrasment.

I shall however with all that diffidence that becomes a young Inquirer, especially in so difficult a subject presume to offer a few Conjectures upon it.

1: Is the Contagion which produces Fevers of One kind, which Operates differently in different

*Hujus enim loci sunt contagiones quarum virtute velut genitali id genus morborum spuriea propagant, & communicata multimodis labe per Homines grassantur. agunt certe, & virulenta potestate, & suo quoque modo sibi proprio, & in alias atque alias Corporis partes, Effectusque statosque quidem at longe diversissimos producunt. unde constat, uti Origine, ita naturis, magnopere inter se discrepare, et suas singulis inditas esse certas vires, quibus, cum per congruas vias in Corpora devenerint actioni faventia, suam quilibet morbi Formam distinctam constanti lege haud aliter procreent quam plantarum, Animalumve Semina,

Seasons, & on different Constitutions? - or are there are so many different species of it? - if we attend to the most common Occa=sional Cause of these Fevers big putrid Exha=lations or Animal Effluvia we shall be inclined to the first Opinion. But when we reflect that these ~~Contagions~~ Miasmata act unifor=ly on all Constitutions which they affect, in all Seasons of the Year, we are led to ~~believe~~ believe the last Opinion, especially when we add to this that Persons who have had One of these contagious Diseases are not exempted from the Others.*

2d. Is it not more probable that the Contagion affects the Solids primarily rather than the

aptis concepta loco, in suam singula de-
-terminatam Speciem evolvuntur.

Gaubii Pathologia
§498. —

Fluids? & do not the Fever — the Debility which attends it, & the Improbability of the Patients being seized a second time with it, all tend to favour this Supposition.

3.d May not the dissolved State of the Blood arise entirely from Debility in the Solids induced by the Sedative powers of the contagious Matter, especially as we always find it proportioned to this Debility? & may not the Hæmorrhages which sometimes attend these Fevers, be rather the Consequence of a preternatural Relaxation of the Solids than of a putrid Acrimony introduced in the Blood?

4.th It has long been a Problem in Physic

why Persons are subject to contagious Dis=
=eases but once in their Lives. Some have
supposed it was owing to the Blood, being but
once capable of undergoing the Fermentation
induced by the several Contagions. but this
will appear very improbable, if we attend
to what was said before, of the Blood, being
renewed every two or three Months. Others
again have resolved the Fact ultimately
into the Will of the Creator, & have thus
checked at once an Inquiry of the utmost
Consequence in Physic. But this mistaken
Veneration has done no less Injury to the Pro=
=gress of Science in every Age, than it has
detracted from the Honour of the Author of

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nature. the more minutely we push our Inquiries into the works of Nature, the more evident traces we find of the Wisdom of the Deity, & this Wisdom is displayed no less in efficient, than in final causes. — I shall therefore attempt a Solution of this Question.

The Force of Habit is well known in our System. all the Organs of Sense are liable to Sensations from Impressions communicated to them by external Bodies. these ~~Sensations~~ Sensations are more or less acute, as the Impressions have been more or less continued. a Man who has long been accustomed to study in a Place adjoining a Smith's Shop, or the Street,

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is deaf to the noise of the Hammer or Chisel which at first disturbed him, but hears at Once the softest Notes of Music, or even a Whispir in an adjoining Room.

a delicate Lady who has long been in a Habit of taking Snuff in large Quantities without feeling perhaps the least Imitation upon her Nose, is thrown into convulsive Fits by the Smell of Musk - Ambergrease or even a Rose. -

a Person who has long been used to chew Tobacco, feels none of those Sensations excited on his Tongue, he did the first day he took it into his Mouth; but if any thing of a different

Nature, with the least Degree of Acrimony is applied to his Tongue, he immediately feels ye same Sensations excited on it, that a Person does who never chewed Tobacco in his Life. — Instances of this Nature might be multiplied without Number. ——

We before aimed to prove, that Contagion was nothing but a Stimulus applied to the Nervous System which induced an encreased action of the Vessels. if this is the Case, may not each Contagion leave the same State of Insensibility upon the Nerves which we find the Sexual Impressions Aforesaid, leave upon each of the Organs of Sense? I know it will

he Objected here, that the venereal Disease, & Itch are received as often as we are exposed to the Occasional Causes of them. to this I would answer, that these Diseases appear to be life connected with the nervous System, & this I take to be the Reason, Why they are never attended with any Fever, except when it arises from topical Inflammation. the infectious Matter moreover is in a fixed state, & hence exerts a more partial stimulus. — If Camphor, or Musk, when wore around the Neck ever secure against contagious Diseases, it must be by exciting a stimulus on the Nerves, & thereby rendering them less sensible to the Stimulus of Contagion. Dr.

Lydenham tells us that ~~the Poor~~ Persons labouring under Gouty Complaints, or Ulcers were almost the only People who escaped the Plague when it raged in London. the Reason of this may easily be explained ~~by the same Way~~ from what we have just now advanced: for it is no less a Law in Impression than Perception, that but One can be made upon a Sense at One. it would be easy to show of how great Application this Law is in Physic. — I grant indeed that if the Impressions we before Spoke off, are intermitted for any considerable time, they act as strongly as ever, when applied again to the Body. this may easily be accounted for,

Nor does it in the least affect the force of those Analogies. for we must remember that they are applied only to One of the Organs of Sense, & are never so violent as to induce any Commotions in the System, whereas the Stimulus of Contagion is so violent as to affect the whole System with an Impression so strong as to leave the Nerves callous if I may be allowed the Expression to every future Impression of a like nature.

5.th Another Question occurs here, & that is, how is it that One part of the Body should be so uniformly affected with the same Contagion? — I think a probable Answer may be offered

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to this. ~~[illegible]~~ We have before presumed that Contagions are in their Natures Specifically different. it is universally allowed that there are Specific Stimuli in Medicine. the Operation of Mercury can be no ways explained but by supposing the Salivary Glands to be Specifically affected by it. Unless we admit this Doctrine I know not how we shall explain the Reason why a few Drops of Antimonial Wine should excite such a Sickness in the Stomach, & yet excite no Sensations on the Tongue or even on the Eye itself; or why a large Quan:=tity of Salt may be taken into the Stomach without producing any Sickness, & yet a few

Grains of it excite the most uneasy or painful Sensations, when applied to the Tongue, or dropped into the Eye. all this seems to depend upon that wonderful manner in which the Sense of Touch is diversified throughout every part of the Body.

Now when we admit these Propositions we may easily comprehend the Reason why the same parts of the Body are so uniformly affected by the same Contagions, such as the Skin in the Small pox - the Lungs so generally in the Measles. & the ~~Liver~~ Gall Bladder in the Bilious Fever.

6th It is a Law in Our System that all Stimuli excite Inflammation when applied to the

Body, & that this Inflammation is always proportioned to the greater or lesser Sensibility of the part affected. the Tendency of most Inflammations when in a ~~[illegible]~~ high Degree is to ~~Gang~~ Suppuration or Gangrene & these are always brought on sooner or later according to the violence of the Stimuli applied. Do not all Contagions therefore act as Stimuli on the Parts they affect? & do not the Gangrenes & Suppurations which happen in all parts of the Body evidently shew that an Inflammation has preceded? - I am not singular ~~in this~~ in this Opinion. the learned M. de Sauvages places the Plague itself among the Inflammatory Diseases.

* Nosologia vol. II - page 363.

His words are" Morbus est Inflammatorius,
"quod indicant Ardor, Litis, Rubido" * - Dr. Sydenham
we find treated it as such. & never failed
to order Bleeding in its first Stages. indome
Cases of the Bilious Fever however the Predisposition of the Patient &
the force of the Contagion cooperate in such a
Manner, as to induce an Atonia upon
the whole System so suddenly, as that no
marks of preceding Inflammation can be per-
ceived. this is the most frequent Appearance
of this Disease in the West India Islands. the
Sedative power of the Contagion Alone prevails
in these Cases without any of the Stimulating.
the Gangrenes then which occur so frequently

in the more malignant states of ye Bilious Fever are the mere Consequence of Atonia, & are not preceded by the usual Phenomena of Inflammation. this is not a new Proposition in Physic. the Gangrenes brought on by Cold & Compression ~~are~~ depend in like manner upon the Tone of the Vessels being destroyed & not upon the ordinary Effusions which take place in true Inflammations which end in Gangrene. this doctrine may be still further illustrated by calling in the Analogy of Poisons which produce their Effects so sud=-denly. it is now universally agreed that their

Operation is entirely confined to the Nerves, & yet how soon do we see all the Appearances of dissolved Blood - ~~Petechiae~~ Petechia & Hemorrhages to succeed their Action. this was long supposed to be owing to a Putrefaction of the Fluids, but can now be explained more rationally by having Recourse to the sudden Atonia induced upon the Nervous System.

7th: a very Natural Question arises here, & that is if we deny Putrefaction, taking place in the Fluids, in What Manner shall we account for the Propagation of the Disease? — to this I answer that I would by no means reject an Assimilation being present in

the Body. this we must admit, nor is it any
way repugnant to the Doctrine we have
been endeavouring to ~~[illegible]~~ establish, espe-
-cially when we extend our Ideas of Assimilation.
— the Measles are no less contagious than the
Bilious Fever, & yet no One will pretend to say
there is the least Degree of Putrefaction attending
them. I grant indeed that there is a tendency
to a putrescent state in this Fever when it con-
-tinues for a considerable time, merely from
~~the~~ encreased Heat & Friction, & from the
want of a fresh Supply of Aliment. But this
happens ~~in Fa~~ likewise in Inflammatory
Fevers, & ~~to~~ has no Connection with a putrid

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Ferment introduced into the blood. What I have aimed chiefly to prove is, that the Disease is seated in the nervous System, & that the Fluids are affected only in a secondary manner. it is of Importance to establish this, as our Indications of Cure hereafter will be entirely founded upon it. –

8th. Nothing now remains but to say a few things concerning the Nature of the Contagion and Miasmata which produce this Disease. but as this Subject is still so very Obscure, & has it has no immediate Connection with the Doctrine we have been advancing, we shall sum up all we have to say upon it in a few words.

From what has been said it appears that this Disease can never be produced without a Concurrence of some highly acid irritating matter introduced into the Constitution. this matter originally may be of an animal or vegetable Nature. we have Instances in of malignant Diseases being produced from both these Causes. in what Manner these substances are diversified so as to produce different Diseases is hard to tell. perhaps it may depend upon different Changes induced upon them from the different Circumstances of Heat & Moisture operating upon them. in this state they are called Miasmata. when the Disease is propagated from One Body to Another they are called

Contagious.

It is now time to proceed to the Method of Cure.

The Indications in this Disease are

I To Abate the increased Action of the Pulse.

& II to Obviate Debility.

To the 1st Indication belong

1st Bleeding — this is of the utmost Consequence in ~~this disease~~ the Beginning of this Fever. all Authors agree in the Propriety of this Remedy.

2d Hillary ~~confirm~~ recommends it in his Treatise upon the Diseases of Barbadoes. the Blood is sometimes covered with an inflam-
matory

Coat when drawn in the first stage of the Dis:
=ease. no limited Quantity of Blood can be
fixed here. it must always depend upon the
Age - Temperament - State of the Pulse & Ve
vis Vitæ of the Patient. - it is best to take
but a small Quantity at first, & repeat
it afterwards if the Symptoms indicate it.
2nd Laxative Medicines are highly useful when
the Bowels are constipated; but they should be
of the most gentle nature. the Sal Glauber
seems to answer best for this purpose. it
should be given in small Doses by which means
it lies longer on the Stomach - is more cooling,
& less apt to purge the Patient immoderately.
3d Cool Regimen. consisting in 1st cool Air

2

2d: cold Drinks & 3d: ripe Fruits.

1st cool Air. There is not a greater Error in modern Practice than keeping Patients too hot indeed, more especially in those we have been describing. future Ages will be as much surprised at our Conduct in this Respect, as we are at the Folly & madness of Asclepiades, who refused his Patients Drinks of all kinds in the first Stages of Fevers. both Practices proceeded from equally erroneous Theories. the sagacious Dr. Sydenham first endeavoured to reform this Practice. we find him dwelling upon it thro all his writings. the amazing Success which has attended the new mode of Inoculation for the small pox, seems to be owing to nothing else than the free use of the cool

* Etiam amplo Conclavi tenendus, quo mul=
=tum et purum aerem trahere possit neque
multis vestimentis strangulandus, sed admodum
levibus tantum velandus est. Celsus Lib: III Cap: 7.

(a) How far the cool air may be of Service in
this ~~Disease~~ Fever, the following Case, communicated
to me by my very worthy & ingenious Dr Gluck Physician
to St Thomas's Hospital, will sufficiently demonstrate.
- in returning from the Havannah after the Reduction
of that place, a Soldier on Board of One of the Transp:=
=ports was seized with the Bilious Fever, & in spite
of all that could be done for him, the Disease ran
on to its last & worst Stages. as he appeared to be

Regimen, & not to any Improvements made in the Medicines commonly given in that Disease, as my ingenious friend & Countryman Dr. Rutton has fully demonstrated in his Treatise lately published upon that subject. [bring in the Sentence on the opposite side here.] I would therefore advise the Chamber Windows of Patients in the Bilious Fever, to be kept constantly open, & artificial Draughts of Air to be introduced into it occasionally. They should likewise lie up as much as possible, & be covered with nothing but the lightest Bed Cloaths. It would be of use besides, this to sprinkle the Floor of the Bed Chamber every now & then with Water, or Vinegar, which by evaporating would induce a grateful Coolness

incurable, & began to grow offensive to the smell, the Doctor ordered him to be brought, & laid in order to prevent his infecting the rest of the Crew, as he took it for granted he could live only a few hours. But to the great Surprise of the Doctor & every One who saw him, in a little time he began to revive — he was soon able to set up - & in a few Days was perfectly recovered. I would be

[return to page 52nd - line 6th]

in the Room, the Heat of which should al-
-ways be rather below than above 60°. of Fa-
-renheit's Thermometer.

2nd Cold Drinks. Nothing can be more cruel, or
ill-judged than to deprive the poor miserable
Patients of that which they cry out so much
for. How many Instances have we of the
most remarkable Cures ~~of Fevers~~ being per-
-formed by a Draught of cold water! Why
then do we oppose a Practice which Nature
indicates, & which Experience justifies? We
are lately informed, that the Practice of giving cold
Drinks in Malignant Fevers prevails so much
in Italy, that it is a very common thing among
the Physicians there to dissolve Ice in all the

* Si è visto nel nostro secolo le Febbri ardenti e le putride ed altre maligne dipendenti da un umor crudo e indomabile, ceder felicemente, e resolversi sotto l'uso dell' Acqua gelata, non solo nel caldo Clima di Napoli, ma anche in altre parti d'Italia, e in Bologna, dove Io medesimo ò veduto questo Metodo perfettamente riuscire.

Osservazione sopra bajuolo irregolare
Del Michele Rosa p: 25.

Drinks they give their Patients, in order to give them an additional Coolness*. Some Prudence however is necessary in the Administration of this Remedy. When the Inflammatory Diathesis prevails, in the Beginning of their Fever, to a pretty high Degree, cold Drinks may do mischief. Upon this Account it is best not to give them in large Quantities 'till the Second or third Day of the Disease, or 'till we are sure from the Sinking of the Pulse, & other marks of Debility that the Inflammatory Diathesis is entirely removed. —

3d. Ripe Fruits - These are of the highest use in all Fevers of this kind, not only because they are grateful to the Patient, but upon the Account of

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their cooling & laxative Qualities. the great Dr. Boerhaave first introduced them at the Risque of his Reputation, & later Experience abundantly confirms their usefulness. it is worth Observing here how bountifully the Author of Nature has provided those Countries, where these Fevers prevail most, ~~the~~ with the most delicious Fruits which are generally produced in that Season of the Year, ~~to~~ when these Fevers are most Epidemic.

To the II general Indication belong

1: Preparations of the Back. this Medicine is the Only One on which we can venture to place any Dependance. the judicious Dr. Sydenham whose Practice ~~was~~ in febrile Diseases, can never be too much admired, nor too closely followed by

* See Dr. Haen's Ratio medendi vol 1 - p 265

Physicians, was the first who introduced the use of the Bark in Malignant Fevers of all kind. Dr. Morton - Dr. Huxham - Sir John Pringle & Dr. De Haen* all abound with Facts in Confirmation of its admirable virtues in these Cases. Each of these Authors recommend it in the highest state of the Disease, & do not confine its use to Remissions, which seldom or never happen in those Fevers where it is most indicated. - The Bark is generally supposed to act in these Cases as an Antiseptic. This Notion was introduced first from seeing its Effects in preserving Bodies from Putrefaction. But I cannot believe it has any analogous Operation upon the human Body, ~~& I would therefore reject the~~

~~[illegible]~~

it appears from Sir John Pringle's Experiments that Camomile Flowers, & Virginia Snakeroot were equally powerful with the Bark in resisting Putrefaction out of the Body. Now if the Bark's Action depended upon its Antiseptic Qualities, what should give it such superior Advantages above these Medicines in these kind of Fevers? — Besides there are few who have been much conversant with ~~Putrid~~ Diseases, but what have seen Gangrenes, in a remote part of the Body, at once checked by a few Doses of the Bark. I would therefore beg leave to differ in ~~[illegible]~~ Opinion from the ingenuous Dr. McBride, who supposes ~~the Bark [illegible] Consistence, or [illegible]~~ that in these Cases it mixes with the Blood, and ~~it [illegible]~~ restores its Consistence by communicating fixed Air to it.

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[illegible].

2nd: the use of acids. these in like manner have been given with a view of obviating putrefaction, & coagulating the blood. But their immediate operation is confined to the stomach, from whence their effects are extended to every part of the body. they serve to brace up ye system & prove excellent cooling medicines. the vitriolic acid is to be preferred to the other mineral acids, as being less heating & more agreable to the stomach.

3rd: The free use of wine. among all ye cordials which have been introduced into medicine, there is none equal to this. it excites the vigour

* Diseases of the Army for 1862.

of the Sensorium, & promotes a due Distribution of the Nervous Influence to every part of the Body. Of how great Use Wine is in the Latter Stages of low malignant Fevers, Sir John Pringle has furnished us with some excellent Examples in his Observation on the Jail or Hospital Fever.*

The best Wine in these Cases is Claret, or good Old Hock. the great Advantage of these Cordials is, that they revive & strengthen the Patient, without exciting any Heat or encreasing the febrile Symptoms. the Wine for the most part is given in too small Quantities to do Service.

Refer on to page 66th

* Treatise upon Fever & Infection.

The use of Blisters in this Disease is more ambiguous than the Exhibition of Vomits. How far they might prove of Service in its first Stage I shall not pretend to say, as I have never seen them tried in the Beginning of the Disease. Dr. Lind relates some remarkable Instances of their Usefulness in the Beginning of the Yellow Fever which was brought from America into England during the late War. But I am apt to think the Disease was so changed from what it was originally, that it would not do to apply this Practice universally to all Climates. in the second Stage of the Disease we have marked Out they are evidently

* Diseases of the Army p: 320.

hurtful, not by dissolving the Blood, & thereby
encreasing its putrid Diathesis as was formerly
supposed, but by encreasing the Atonia of
the Vessels, & thereby ~~endangering~~ inducing Gangrene
in the places where they are applied. Sir
John Pringle mentions a Case of a Soldier
which confirms this, Who was notwithstan-
ding relieved by a plentiful use of the Bark*.
— It is much to be wished that the proper
use of Blisters was fully ascertained in this
as well as in other malignant Fevers. We
have too few Facts in Medicine to speak with
any Degree of Confidence either in their Favour
or against them. — For my part I must

acknowledge my want of Experience and Observation upon this Head. —

Thus have I finished what I intended in this Essay. had I entered into a more minute Dispersion of all those Questions, to which this Subject would naturally have led me, this Dissertation would have exceeded the Limits I proposed. happy shall I esteem myself, if any thing I have hinted will tend to throw any new Light upon the Nature of the Disease, or lead to a more successful Treatment of it! — But if I have failed in this Attempt, I shall take Shelter under the Words of a Sage "magnis tentasse voluisse"

Finis.

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There are two Other Remedies which are sometimes ordered in this Disease which do not properly come under either of the Heads we have been treating of, viz: Vomits & Blisters. we shall conclude w: a few Observations upon them. –

Dr. Hillary in his Treatise upon the Diseases of Barbadoes speaks against the former of these & as he was a Practitioner of considerable note in that Island, his Practice has been pretty generally followed by most of Physicians. There is nothing perhaps that has tended more to retard the Progress of Medicine that preconceived Hypotheses concerning the Causes of Diseases, & however much Practitioners may declaim against Theory. There are few who ever prescribe any thing without laying

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down some Indications of Cure. it is highly probable that Dr. Hillary, & those who have follow=ed his Practice have been misled by this great Source of Error in Medicine. I have conversed with several Gentlemen who have seen the Disease in its worst Stages in the West India Islands, who have spoke very differently of the Event of Admi=nistering Vomits. Dr. George Taylor a Gentleman who has practised Physic with great Success for many Years at St. Christophers, assured me that he had never lost a Patient in the Bilious Fever to whom he had given a Vomit, provided he was called on the first or second day of the Disease; the Emetic he generally used, was a Solution of Tartar Emetic in Water which he gave in such Doses as to

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excite a gentle Vomiting without straining the Patient violently. Since I heard this, Dr Huck informed me, that during the Seige of Martinico & the Havannah where he attended his majesty's Troops during the Late war, he had given Vomits with the utmost success, & that, in the most malignant Degrees of this Fever his Only Dependance was placed upon them. I would not however recommend Vomits with a View of evacuating putrid Sordes from the Prima Via which according to some act as Fuel to the Disease. we before proved that this had little or no Share in kindling up the Complaints of the Patient. they seem rather to produce their Effects by bringing on a Determination to and the Skin, & thereby Obviating the febrile Spasm induced upon its Surface. there are Cases however in which

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the Disease is attended with such a Degree of vomiting that Emetics are less necessary, but on y^e contrary antimettic Remedies are indicated such as Plasters of Venice Treacle applied to y^e Region of the Stomach, & plentiful Doses of Riverius Mixture. —

The use of Blisters in this Disease &c. &c

[return back to page 63^d].